REMARKS/ARGUMENTS

In an Office Action dated May 30, 2007, claims 1-18, 21-25, 32, 42, 43, 50 and 55-72 were rejected under § 112; claims 1, 8-13, 18, 19, 26-31, 36, 37, 44-49, 54, 55, 62-67 and 72 were rejected under § 103 over Perlman and Mor; and the remaining claims were rejected under § 103 over Perlman, Mor and various other references. Applicants have amended various claims to address one of the § 112 rejections and respectfully traverse the remaining § 112 rejections and the § 103 rejections and request consideration of the following arguments.

§ 112 Rejections

Claims 1 and 55

Claims 1 and 55 have been amended to improve their clarity.

Claims 6, 7, 24, 25, 42, 43, 60 and 61

Claims 6, 7, 24, 25, 42, 43, 60 and 61 were rejected under § 112 as the use of "words" appeared out of context. Applicant traverses the rejection.

The claims require including the number of frames and words transmitted and received. It is well known that frames are formed by a number of words. It is also well known that all frames are not the same length, that they do not contain the same number of words. Thus the two values do not have a direct relationship on a longer term so that providing values for both is useful.

Applicant submits that the claims are clear and request withdrawal of the rejection.

Claims 14, 32, 50 and 68

Claims 14, 32, 50 and 68 were rejected under § 112 as having "true destination address" out of context. Applicant traverses the rejection.

Applicant requests reference to paragraphs [0031] and [0032] of the original specification. Paragraph [0031] indicates the tracer frame has a D_ID or Fibre Channel destination address of FFFFFDh. Paragraph [0032] indicates one of the fields in the frame payload is the true D_ID, the final destination of the tracer frame. As the tracer frames are addressed to the fabric controller resident on each received switch, the actual

intended destination to which the trace is being performed must be contained somewhere and is in the payload in these claims.

Applicant therefore submits that the claims are proper and requests withdrawal of the rejection.

Claim 21

Claim 21 has been amended to correct the dependency error.

§ 103 Rejections

Claims 1, 8-13, 18, 19, 26-31, 36, 37, 44-49, 54, 55, 62-67 and 72 were rejected under § 103 over Perlman in view of Mor. Claims 2-7, 20-25, 38-43 and 56-61 were rejected under § 103 over Perlman in view of Mor and further in view of Soumiya. Claims 14, 16, 32, 34, 50, 52, 68 and 70 were rejected under § 103 over Perlman, Mor and Fredericks. Claims 15, 33, 51 and 69 were rejected under § 103 over Perlman, Mor and Lee. Claims 17, 35, 53 and 71 were rejected under § 103 over Perlman, Mor and Hongal. Applicant traverses the rejections.

Claims 1, 19, 37 and 55

The claims all require a switch which includes a plurality of interconnected switching units coupled to the ports. The Office Action asserts that three separate switches 26, 27 and 28 in Mor together comprise a multi-tier switch. Applicant vigorously traverses this statement. Applicant requests reference to paragraph [0053] and Figure 7 of the instant application. There the Applicant clearly distinguishes individual, separate switches, such as those in Mor, with a multi-tier switch as required in the claims. Applicant submits that it is improper to use hindsight to simply combine clearly independent switches and label them as a multi-tier switch, in direct contravention to the definitions provided by the Applicant.

Further, the proposed combination in the Office Action destroys any meaning to the concept of fabric. As known to one skilled in the art, a fabric is formed by a series of independent switches. The proposed combination technique of the Office Action destroys the meaning of fabric by arbitrarily combining independent switches into a "multi-tier" switch, when the switches are clearly independent to form the fabric. It is

improper to relabel the switches as proposed as it is clear that they are clearly intended in Mor to be independent switches, not a switch including a plurality of interconnected switching units as in the claims.

Further, when the combination with Perlman is considered, the proposed combination of the Mor switches would not include information about each of the interconnected switching units. Perlman teaches adding information to the explorer messages for each bridge connecting two network rings. When the combination of the Office Action is performed, the three switches of Mor would collapse to be a single bridge in Perlman, which would then only identify the bridge between the WAN 24 and the user 40. Thus no internal switching unit information would be provided or necessary, as such information would not be needed to perform the source routing of Perlman. The only time Perlman would add information about each switch of Mor is if the switches were independent, but then the required included plurality of interconnected switching units would not be present.

Applicant submits that the proposed combination of Mor is improper and, if performed, still does not teach the requirements of claims 1, 19, 37 and 55. Applicant therefore requests withdrawal of the rejection and allowance of all claims.

Claims 11, 29, 47 and 65

Claims 11, 29, 47 and 65 require the fabric manager to select the port to transmit the tracer frame based on normal routing rules. The Office Action cites col. 3, lines 31-33 and 54-55 in rejecting the claims. Applicant traverses the rejection. The cited portions of Perlman relate to ordinary messages. Those normal messages do not have any of the required additional information of the claim added to them. Thus their operation is not relevant to the claims. Further, they do not relate to the explorer messages discussed at col. 5, lines 29 to col. 6, line 8. Perlman, at col. 5, lines 63-65, specifically notes that the modified explorer message is forwarded to all connected LANs, except the source LAN. Thus Perlman indicates that explorer messages use very special routing rules, not the normal routing rules required by these claims.

Applicant submits that claims 11, 29, 47 and 65 are allowable.

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Claims 12, 30, 48 and 66

Claims 12, 30, 48 and 66 require the frames to include source routing information and that the ports transmit them based on the source routing information. The Office Action cites col. 3, lines 31-33 and 54-55 in rejecting the claims. Applicant traverses the rejection. The cited portions relate to ordinary messages. Those normal messages do not have any of the required additional information of the claim added to them. Thus their operation is not relevant to the claims. Further, they do not relate to the explorer messages discussed at col. 5, lines 29 to col. 6, line 8. Perlman, at col. 5, lines 63-65, specifically notes that the modified explorer message is forwarded to all connected LANs, except the source LAN. Thus Perlman indicates that explorer messages use very special routing rules, not the source routing required by the claims.

Applicant submits that claims 12, 30, 48 and 66 are allowable.

Claims 13, 31, 49 and 67

Claims 13, 31, 49 and 67 require using normal routing rules if the source routing information does not indicate a directly connected device. The Office Action cites col. 3, lines 38-40 about the end system reading the message. Applicant does not understand how this citation relates to the claims. It does not involve routing at all. Further, as with claims 11 and 12, it is to a portion for normal messages, not explorer messages and therefore is further unrelated.

Applicants submits claims 13, 31, 49 and 67 are allowable.

Claims 14, 32, 50 and 68

Claims 14, 32, 50 and 68 require the frame to be destination addressed and the fabric manager to retrieve the true destination address from the payload. The Office Action combines Perlman and Fredericks to form the rejection. Applicant traverses the rejection.

Applicant first notes that the Perlman explorer messages are specifically addressed to the desired end point. To change them to being addressed to a well known address is not taught or suggested by Perlman and would completely destroy the

fundamental operation of the Perlman explorer message. This is clearly a hindsight combination and goes against the teachings of the reference.

Fredericks relates to Fibre Channel RNID ELS messages. Referencing col. 6, lines 21-34, the addressing of the message is described. It states the message is preferably sent to the nearest neighbor node, though it also notes that any node can be addressed. The fabric controller well known address is only used if the nearest neighbor node is a fabric node, a special instance. Otherwise the message is addressed directly to the other node. Fredericks does not mention anything about retrieving the true destination address from the frame payload, and would not, as the frame is addressed to the relevant item. The Office Action appears to equate the command code in the RNID ELS to the required true destination address, but that equivalence is simply incorrect when the meaning of true destination address is construed properly.

Applicant submits the rejection is improper and that the claims are allowable.

Claims 15, 33, 51 and 69

Claims 15, 33, 51 and 69 require there to be equal cost routes and the frame is transmitted over all such routes. The Office Action brings in Lee to reject the claims. Applicant traverses the rejection. While Lee may mention the existence of equal cost routes, it does not teach or suggest sending the frame over all of them as required in the claims. The cited portion of Lee is related to routing a frame around bottlenecks, so replicating the frame across all of the routes is actually opposed to Lee as that would teach adding many more frames to a congested network.

Applicant submits the rejection is improper and the claims are allowable.

CONCLUSION

Based on the above remarks Applicants respectfully submit that all of the present claims are allowable. Reconsideration is respectfully requested.

Respectfully submitted,

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